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April 3, 1995

VIA MESSENGER

William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: ET Docket No. 93-7 — Notice of Ex Parte Communication

Dear Mr. Caton:

On Friday, March 31, representatives of Apple Computer and Echelon Corporation spoke by telephone with Mark A. Corbitt, Director, Technology Policy of the Commission's Office of Plans and Policy. We discussed Echelon's views regarding the proposed decoder interface in ET Docket No. 93-7. The attached handouts were provided to Mr. Corbitt. Representing Apple Computing was James M Burger, Director of Government Affairs. Representing Echelon were Oliver R. Stanfield, Vice President and CFO, and Drew Hoffman, Vice President of Engineering, along with the undersigned and Glenn B. Manishin of this law firm, counsel to Echelon.

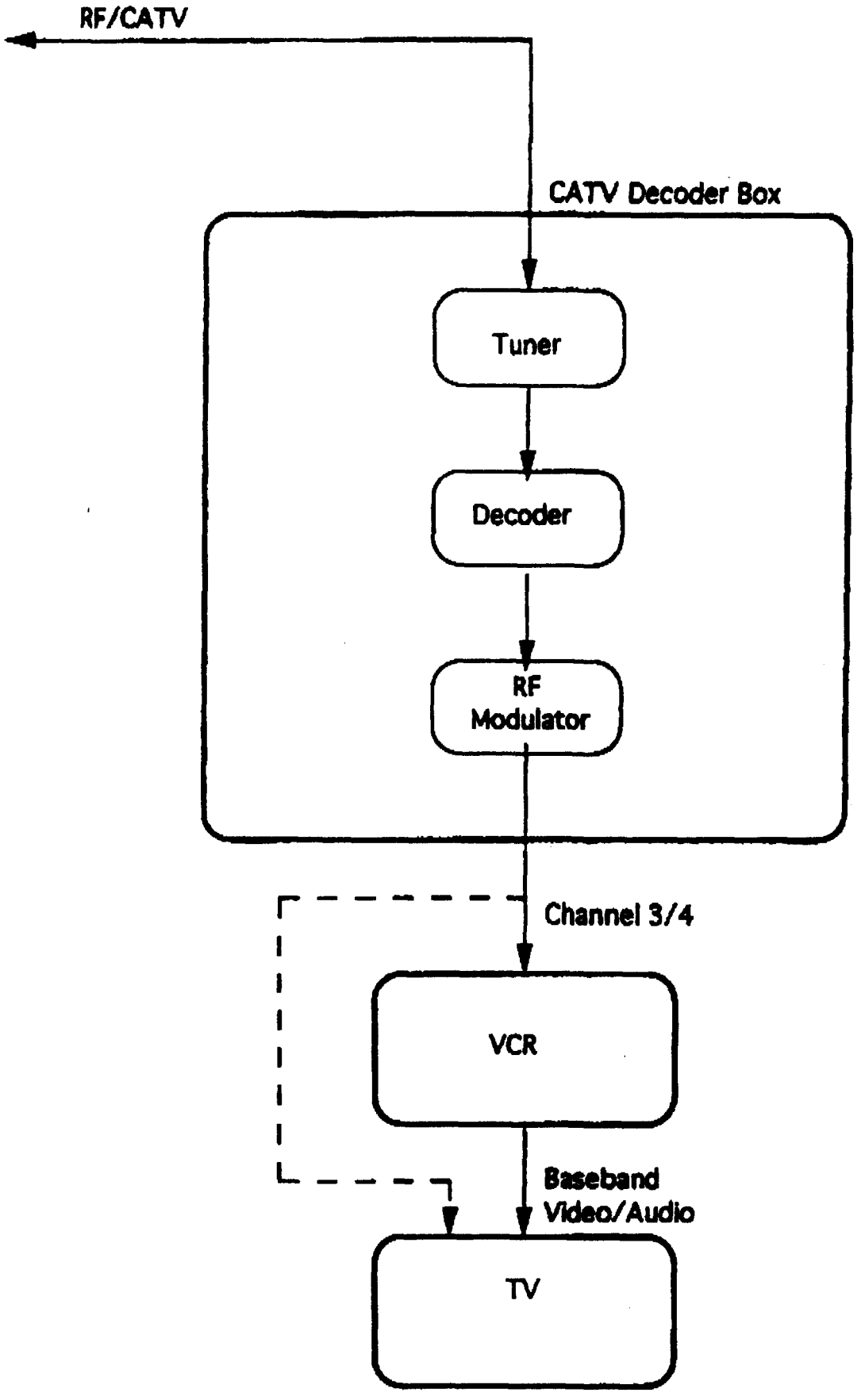
Pursuant to Section 1. 1206 of the Commission's Rules, two copies of this letter are enclosed for filing. Please contact me should you have any questions in regard to this matter.

Sincerely,

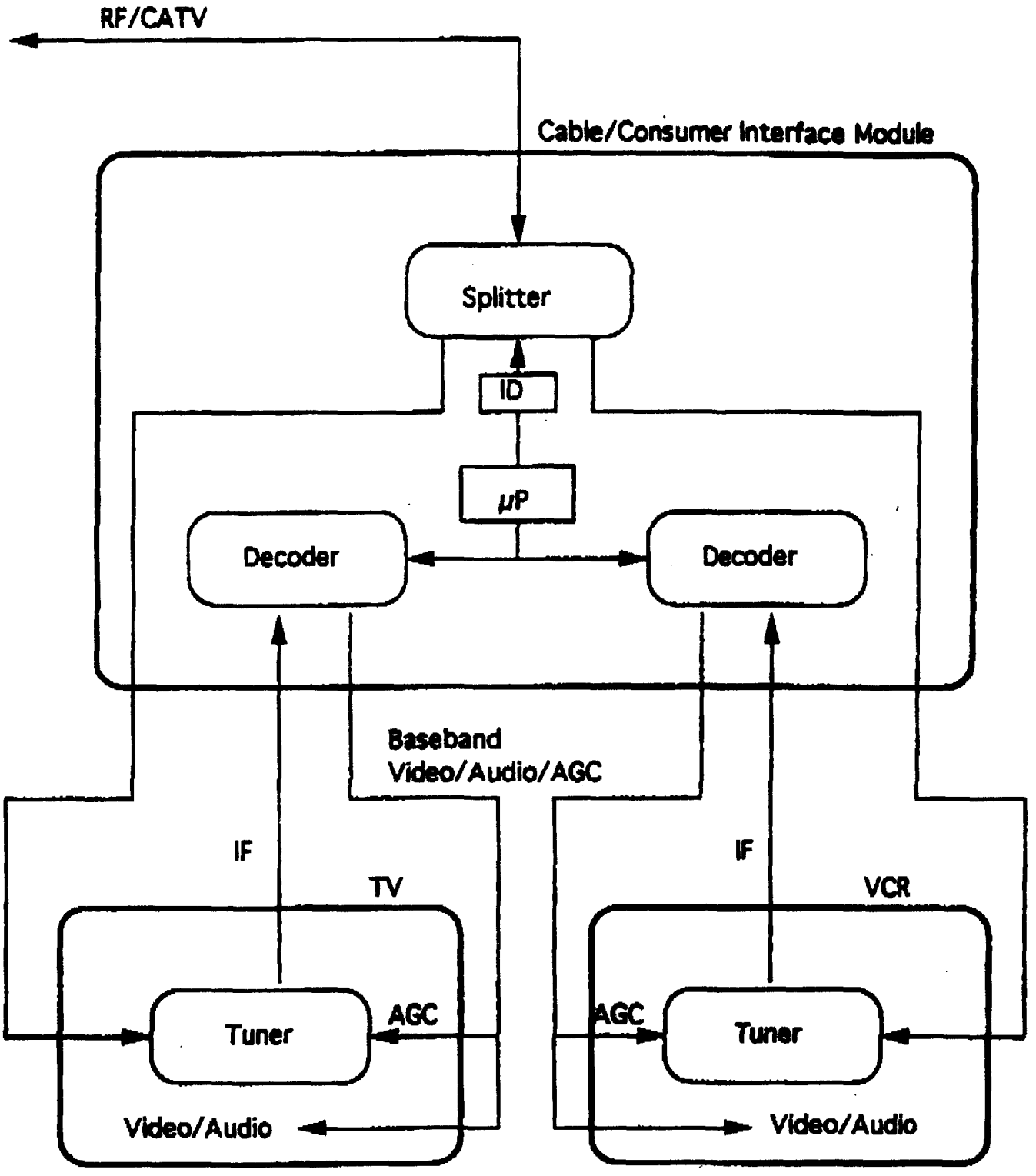
Jeffrey Blumenfeld

JB:hs
Enclosures
copy: Mark A. Corbitt

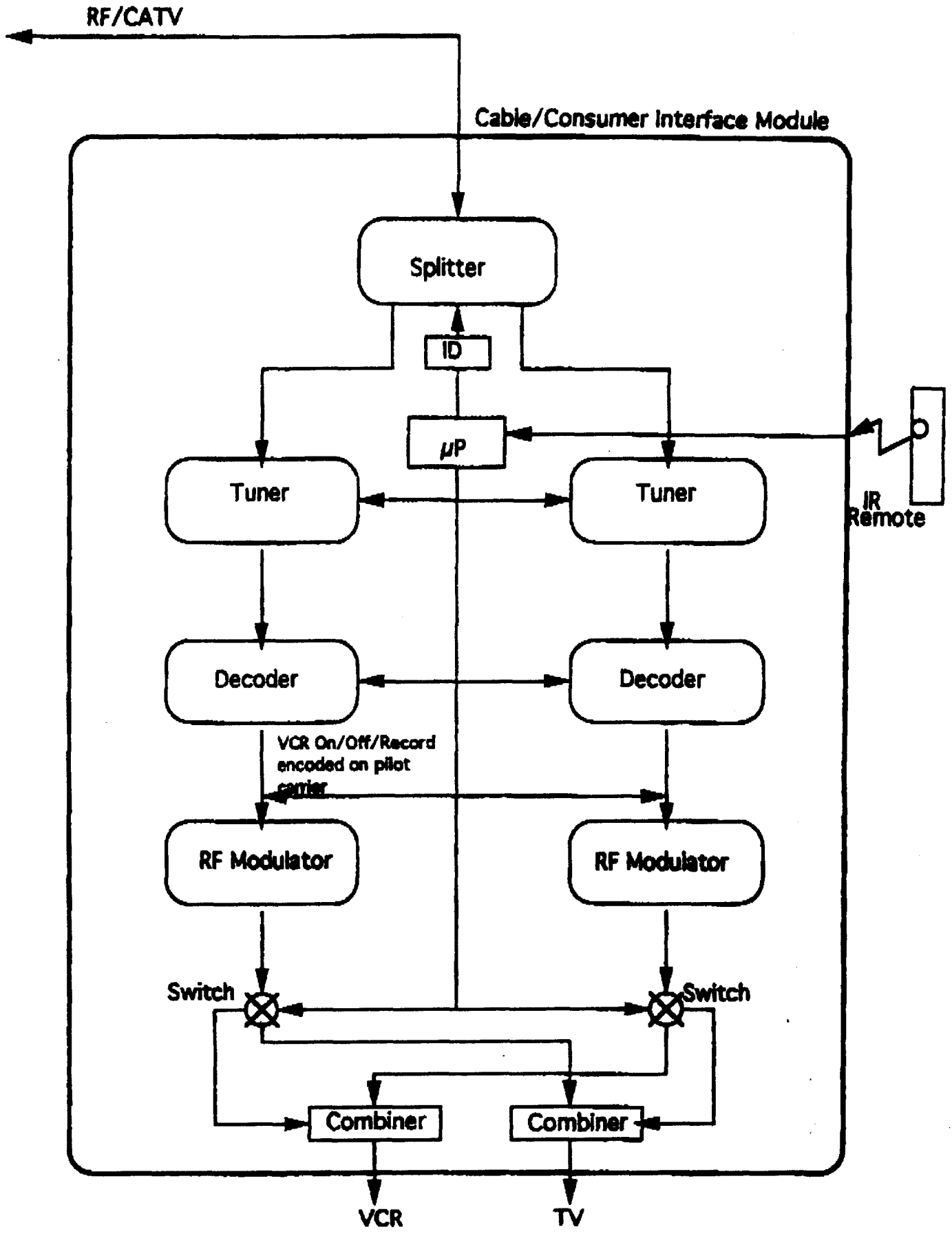
- **Solve the following incompatiblities between CATV decoders and AV equipment**
  - Consumers must be able to use the following features of AV equipment when attached to a decoder, independent of whether channels received are in the clear or scrambled:
    - Simultaneous viewing and VCR recording
    - Recording of multiple programs on different channels
    - Picture-in-picture (PIP)
  - Proposed implementations can solve incompatibility problems in simple and straightforward ways without the use of a complex control bus such as IS-60
  - Some alternatives can use existing AV eqipment without modification



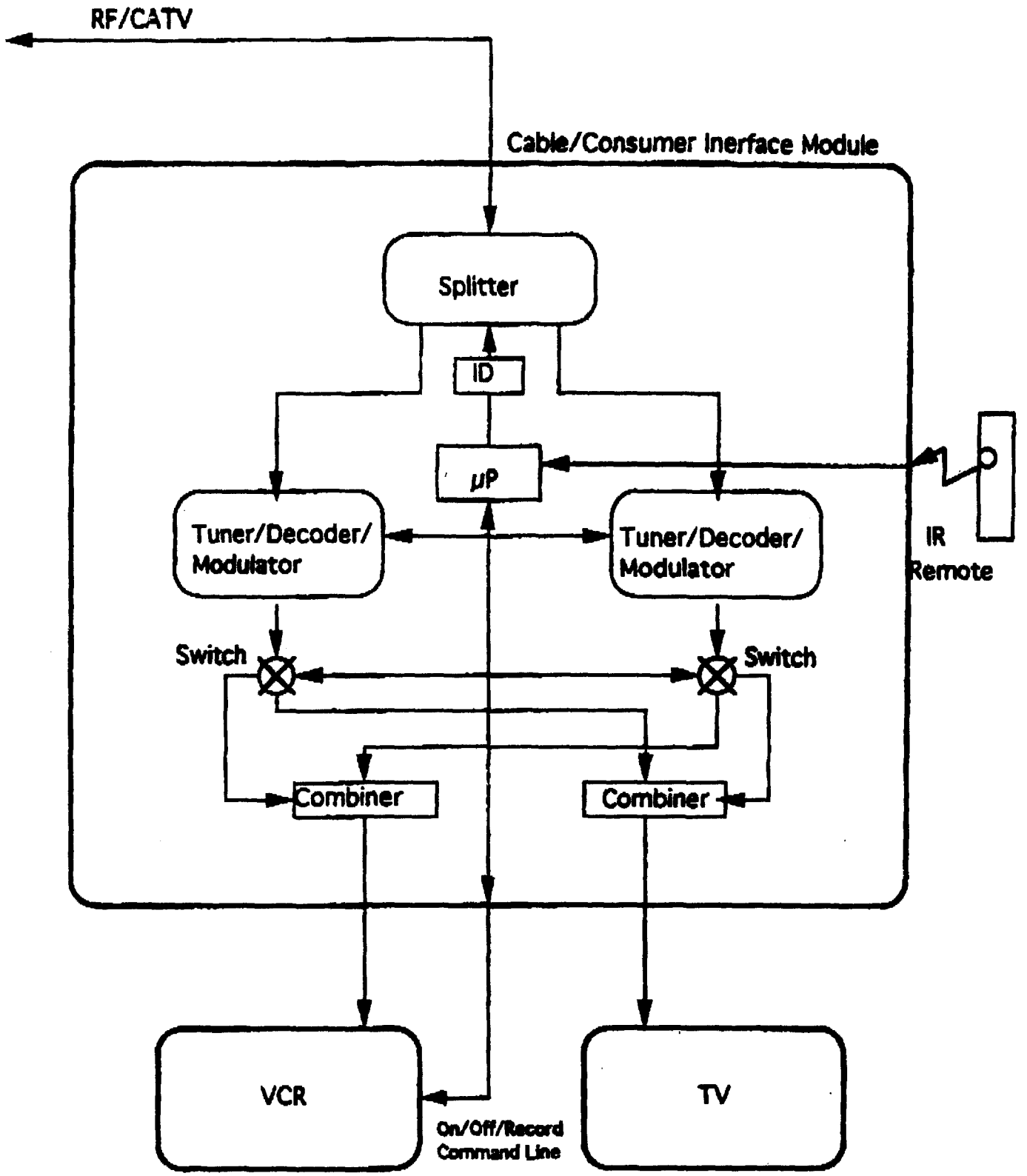
Typical Existing CATV Decoder/AV Equipment Connection



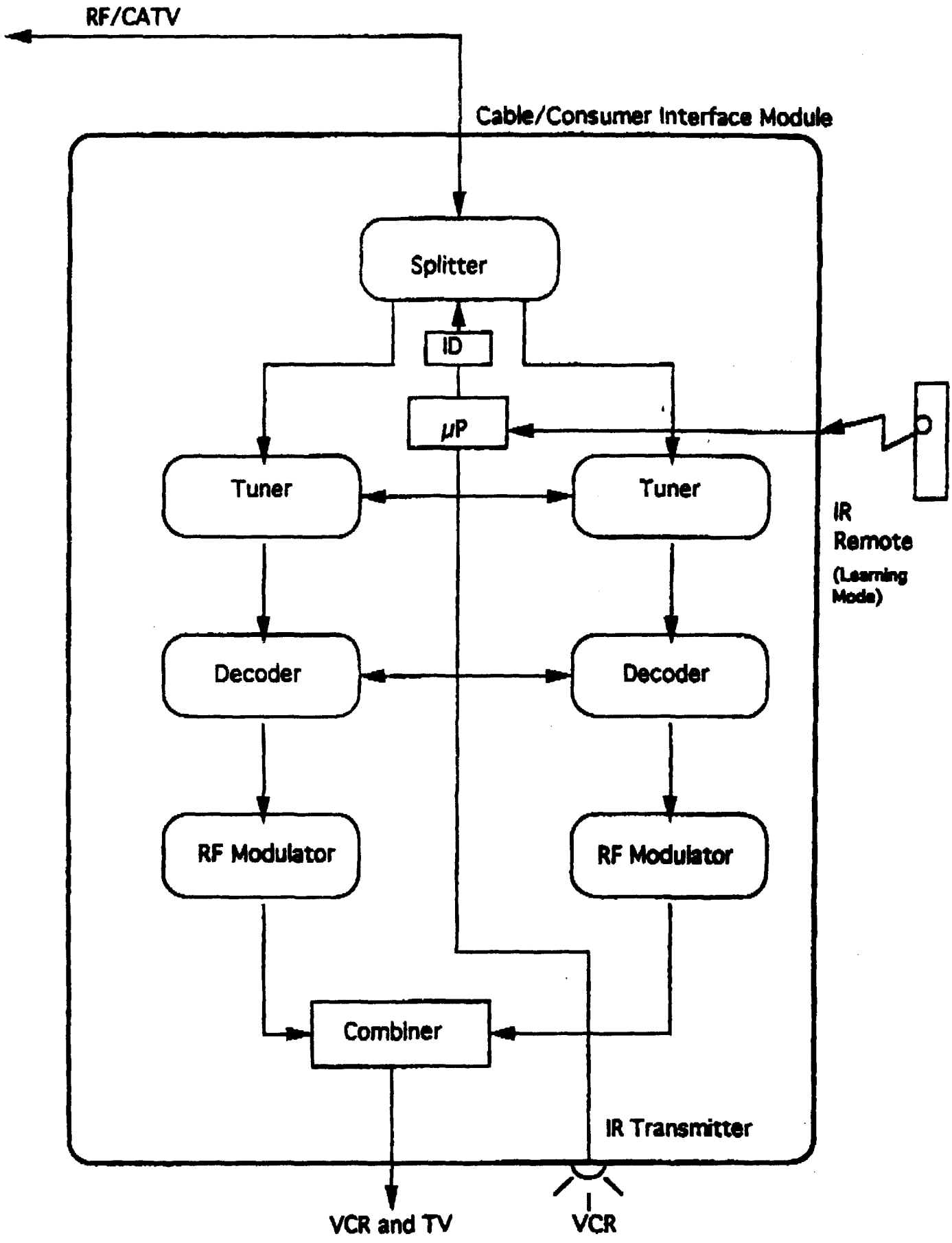
Alternative 1: Dual Component Decoder Approach



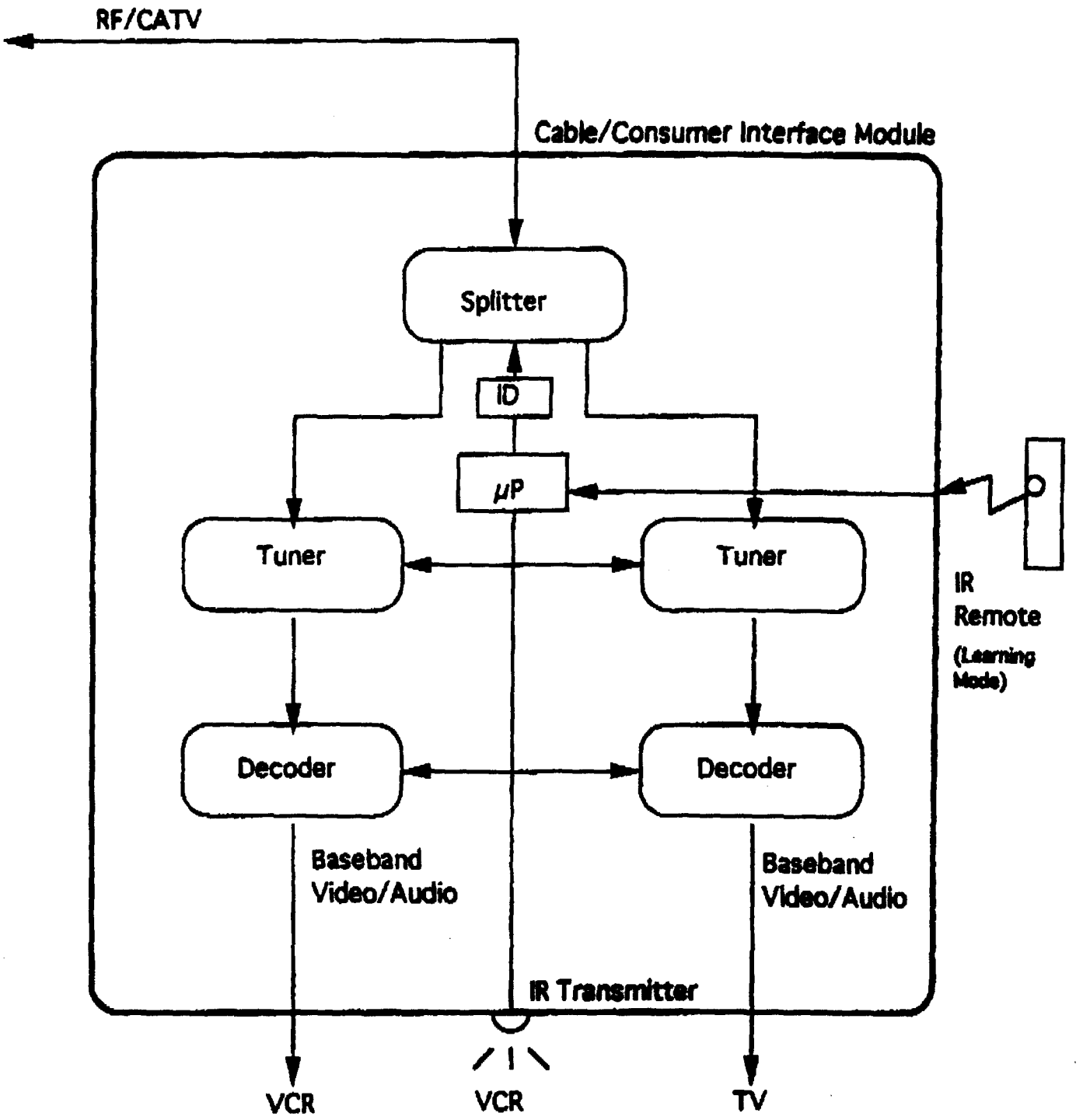
Alternative 2: Dual Tuner/Decoder Approach



Alternative 3: Dual Tuner/Decoder with Command Line Approach



Alternative 4: Dual Tuner/Decoder with IR Communication Approach



Alternative 5: Dual Tuner/Decoder with IR Communication Approach (Baseband Video/Audio)

CC Docket No. 93-7 (Cable Equipment Compatibility Standards)

The August 15, 1994 proposal of the EIA/NCTA Cable Consumer Equipment Compatibility Advisory Group (C3AG) includes recommendations for a Decoder (de-scrambling) Interface that incorporates portions of a contested interim standard (CEBus or EIA IS-60) for home automation. FCC adoption of the proposal would be unlawful, contrary to Commission procompetitive policies, and fundamentally inconsistent with innovation technology in the emerging home automation market by excluding or disadvantaging competing protocols. There is no technical need to use CEBus *or any other protocol* in the cable compatibility standards. "Minimal standardization" should be the watchword in computers, communications, information processing and other technologically dynamic US industries

1. Legal Scope of FCC Standardization Authority

   - 1992 Cable Act (Section 17) limits FCC standardization authority to adopting specifications for cable programming functions (scrambling/de-scrambling) in order to resolve conflicts with features of televisions and VCRs.

   - Cable Act directed FCC only to eliminate three specific incompatibilities preventing (1) watching one cable channel and recording another; (2) sequentially recording two or more scrambled channels; and (3) use of advanced TV equipment functions (picture-in-picture).

   - Cable Act does not authorize FCC to adopt rules for general "interop-erability" of AV equipment. May 4 Report & Order recognizes that Commission must separate cable security/access from other functions (menus, decompression, etc.) that should not be standardized in order to promote competition and innovation (¶¶ 29, 42, 143).

2. Alternative Technical Solutions

   - C3AG proposal for control channel communications protocol is technically unnecessary and overly complex approach to simple engineering issue.

   - Several different descrambler/converter architectures provide efficient, cost-effective solutions to 1992 Cable Act incompatibilities, without standardizing home automation or other non-programming functionalities.

   - Information exchange needs between TV and "set-back" descrambler are limited to channel selection and other minimal data that can be supported in VBI bandwidth or low-level, competitively neutral protocol such as I^2C.

   - Modular approach would permit incorporation of descrambling/security functions into AV equipment, set-back boxes, or other devices in multiple

configurations for different consumer needs, *and* allow retrofitting of large TV installed base.

- FCC should propose standard that governs physical interface only (*e.g.*, RCA jack, RS-232, RJ-11) with minimal or no use of command/communications protocol.

3. Exclusionary and Anticompetitive Effects

- C3AG proposal is attempt to have government mandate inclusion of one specific home automation technology into all "cable ready" AV equipment.

- Home automation is an emerging, competitively vibrant market. Premature standardization will stifle innovation and eliminate development of sophisticated, technically diverse solutions. "Minimal standardization" should be the watchword in computers, communications, information processing and other technologically dynamic US industries.

- Inclusion of a network protocol into decoder interface will either (a) create incompatibilities with other home automation protocols, or (b) require use of gateway protocol translators by competitors that are more costly, slower, and frequently interfere with network functionalities.

- Most likely approach to home automation is medium of existing electrical wiring (powerline). Under United States approach (Part 15), spread spectrum protocols like CEBus may control entire powerline, excluding other communications. CEBus technologies for powerline and RF media are proprietary and patented.

- Complex decoder interface architecture would position consumer electronics and/or cable industries as exclusive "gateway" to the home for communications of the future, competitively disadvantaging computer industry.

- "Plug and play" AV interoperability will be resolved by marketplace forces, as in PC and stereo equipment markets, without governmental fiat. Mandatory government standards are far more exclusionary than voluntary industry "consensus" standards, because the former would require a single technology and architecture for all "cable ready" TVs, VCRs and cable descramblers nationwide, freezing out future technical developments.

- FCC standardization of home automation market would be a disaster—much as if government had standardized the personal computer industry in 1982, before Windows or Macintosh operating systems even existed!

4. Misinformation on Equipment Compatibility

- *Claim:* "A robust control channel is needed and appropriate for 'future' services in addition to the Cable Act's specific directives."

  False. "Forward" compatibility with possible future AV services (video on demand, VDT, etc.) is not a proper scope of FCC standardization rules. Commission cable compatibility regulations will not *prevent* providers (AV, cable, computers, or others) from marketing any equipment for new video or information services.

- *Claim:* "CEBus is a limited AV equipment protocol."

  False. CEBus is not a special descrambling protocol, but "a home automation standard" still under development by EIA for "a wide spectrum of consumer products." (EIA 8/15/94 submission at p.8.) EIA's draft AV-Bus specification explicitly shows connections among AV devices and "other CEBus media" (powerline, RF).

- *Claim:* "CEBus is not in the decoder interface (IS-105), but only a small subset of CEBus commands."

  False. The IS-105 decoder interface messaging protocol is specifically defined as CEBus and uses IS-60's CAL language. *See* C3AG 8/15/94 submission at pp. 17, 20; EIA 8/15/94 submission at pp. 4, 8, Attach. 1 at 2, 3. Decoder interface language and command set are easily extensible into other devices and media (*e.g.,* powerline) using spare microprocessor capacity.

- *Claim:* "No one is disadvantaged by inclusion of IS-60."

  False. Incorporation of a network protocol into the decoder interface will exclude or seriously impede rival home automation technologies through requirement of complex and costly protocol converters.

- *Claim:* "CEBus is not in EIA's new 'descrambling only' proposal."

  False. EIA has proposed a "descrambling only" solution, but to date has only outlined general nature of proposal. EIA confirms that its present plan is to include CEBus when submitting proposed descrambling only architecture to FCC.